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NOTES ON THE BREEDING PLUMAGE OF THE MALE BLACKBREASTED
WEAVERBIRD *PLOCEUS BENGHALENSIS* NEAR HYDERABAD,
ANDHRA PRADESH¹

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(With 2 plates)

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During a visit to ICRISAT Campus (Patancheru, Medak district, Andhra Pradesh) in August 1996, a breeding colony of blackbreasted weaverbirds was seen. This was the first record of these birds breeding in Andhra Pradesh. A closer look at the birds showed that all the males had white cheeks. This did not correspond to the normally known breeding plumage of this bird. A similar observation was made in another colony about 15 km from ICRISAT. This variant breeding plumage has occasionally been reported in earlier literature and some very old specimens (1863 & 1890) from northeast India are in the British Museum of Natural History. Not much thought has been given to this aspect of the bird's plumage. These variations in breeding plumage give rise to some interesting queries like hybridization with other weaverbirds, relationship of the disjunct populations and a need to study the breeding ecology and taxonomy of *Ploceus benghalensis*.

The blackbreasted weaverbird *Ploceus benghalensis*, an endemic of the Indian subcontinent, has been reported earlier from Hyderabad in 1985 (Pittie and Taher 1985). On August 25, 1996, two of us (A.P. and S.T.) were birding on the campus of ICRISAT, near Patancheru, Medak dist., when we spotted a colony of about 50 of these birds, nesting in short grass and bulrushes (*Typha* sp.), close to a colony of nesting bayas *Ploceus philippinus*. There were

15-20 nests of *P. benghalensis*, and construction was in full swing. Most of the males were in breeding plumage, with the golden yellow cap and black breast band prominently visible. But there was something wrong with their faces! The illustration in the PICTORIAL GUIDE (Ali and Ripley 1983) just did not match the birds we were watching. In this book, breeding males are shown with brown cheeks, sides of neck and ear-coverts, whereas the birds we were observing had white feathers in those areas! And not just a few birds had this plumage, all breeding males had it. A sketch was made on the spot, and when compared with the text and illustrations in other books (Ganguli 1975), the discrepancy remained. We

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called up C. Tom Hash, who works on the campus and is a keen birder, informing him of our observations, and he replied immediately "But aren't they different!" Indeed they were. Additional breeding colonies of these birds were seen on September 8, 1996, comprising 45-50 nests, in flowering Sudan grass *Sorghum bicolor* patches and on peripheral vegetation (mainly Polygonaceae, Verbenaceae, Gramineae, Meliaceae, Faboidae and Compositae) about an open well in the same campus. Photographs of the birds were taken and sent to the Bombay Natural History Society for comparison with their collections. No matching male was found. Subsequently, 4 live birds (2 males and 2 females) were sent to the BNHS on September 18, 1996 for their collection. Observations of the breeding activity at ICRISAT continued until November 3, 1996, when 2 immature birds were observed near a colony of 26 nests of which 19 had tubes, which in some cases were c. 36 - 38 cm long. At least one nest had a large hole in its egg chamber region, indicating predation. After this, birds in breeding plumage were not seen during visits on December 1, 1996, January 19 and April 6, 1997.

The variant plumage was noticed once again during the breeding season of 1997, when on June 21, a colony of 13 nests was observed, of which 10 were under construction with fresh green vegetation. White cheeked males, some with a white collar on the hind neck, were busy at them. At least 2-3 birds were observed bringing yellow flowers from a nearby *Acacia* sp., and placing them at the base of the half completed egg chamber, behind the 'chin-strap' (see also Ambedkar 1972). A female also visited the colony while we watched, sending the males into paroxysms of display. On August 1, 1997, Suhel Quader surveyed the colony and found one nest with 4 eggs, one with 1 egg and a freshly hatched chick, one with 2 eggs and a fledgeling, one nest with 3 eggs, and one nest with 2 chicks with feathers. On August 10, 1997, this colony had 12 nests, of which 4 were under construction with

green vegetation. Two of these nests were inspected by Suhel Quader and A.P. One of them had 4 white eggs, and the other had 2 (the remaining nests were not examined). Between 400 and 500 birds were observed within the ICRISAT campus by Suhel Quader, in June, July and August 1997. Some of these were trapped in mist nets, photographed (Plate 1, Fig. 1), measured and released. Their measurements are given below in Appendix I. Almost all males seen had white cheeks. Some males had the sides of the head white suffused with a wash of brown. During this time, the baya *P. philippinus* and streaked weaver *P. manyar* were also breeding, mostly in separate colonies except one case, where *P. philippinus* and *P. benghalensis* had a mixed colony, in which *P. philippinus* had constructed nests hanging from banana (*Musa* sp.) leaves, while *P. benghalensis* hung theirs from the interwoven leaves of bulrushes. Another flock of c. 30 birds was observed on July 27, 1997 by C.T.H. northwest of Golconda Fort, Hyderabad, which is at least 15 km away (as the crow flies) from the ICRISAT campus. Here too, all males had similar white feathers on the face. A colony of about 7-8 nests was under construction among typha reeds.

A preliminary literature survey by Dr. Kumar Ghorpadé (*in litt.* 14-9-1996) and Dr. S. Unnithan of the BNHS (*in litt.* 27-9-1996), revealed that Jerdon (1863) described the male blackbreasted weaver thus, "the cheeks, ear-coverts, and sides of the neck white, more or less suffused with dusky on the ear-coverts and throat". Oates (1883) wrote, "throat, cheeks and ear-coverts white, sullied with brown on the latter two parts". Murray (1890) described a breeding male as having "... cheeks, ear coverts, sides of neck and throat white, more or less suffused with dusky...". But surprisingly, Oates and Blanford (1889-98) state, "After the partial spring moult ... the chin and throat become whitish or whity brown, and the entire side of the head and neck become uniform brown ..." and Baker (1922-30) "sides of head and lores brown; chin and throat



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Fig. 1 Blackbreasted weaverbird *Ploceus benghalensis* were trapped, measured and released.



R. BHARGAVA/CWLO

Fig. 2: (left) Type A: Peak nuptial plumage;
(right) Type B: Constituted 10-15% of total blackbreasted males.



Fig. 3: Type C: Only one specimen was found of its type.



Fig. 4: Specimens from the British Museum of Natural History, Tring: four males in breeding plumage.

BREEDING PLUMAGE OF THE MALE BLACKBREASTED WEAVERBIRD

APPENDIX I

MEASUREMENTS OF *PLOCEUS BENGHALENSIS* MALES

Date (1997)	Time (hrs)	Sex	Wing (mm)	Tail (mm)	Tarsus (Right) (mm)	Bill Length (mm)	Bill Depth (mm)	Bill Width (mm)	Weight (gms)	Ring No.	Band Colour
21-6	0655	M br+	71	43	20.0	12.3	-	-	20.50	-	Red
21-6	0705	M br+	71	41	21.0	12.6	-	-	22.50	-	White
21-6	0900	M br+	72	45	21.5	12.9	-	-	23.75	-	Orange
21-6	0900	M br+	68	44	20.0	11.9	-	-	23.25	-	Dark Blue
21-6	0900	M br+	-	-	-	-	-	-	-	-	Light Green
15-7	0800	M br+	69	45	20.0	12.3	7.2	8.7	23.50	AB12 3680	-
17-7	0730	M br+	64	43	20.5	12.8	7.0	8.8	21.75	AB12 3690	-
18-7	0800	M br+	69	45	20.0	11.9	6.8	8.5	23.00	AB12 3698	-
18-7	1700	M br+	68	46	19.5	11.4	6.5	8.7	24.00	AB12 3700	-
18-7	1700	M br+	67	45	20.0	12.5	6.8	8.7	24.50	AB89 511	-
25-7	0900	??	69	44	20.0	12.6	6.8	8.5	22.25	Z4851 7	-
10-8	1010	M br+	68	44	19.5	12.8	6.9	8.2	24.00	Z48531 1	-

NOTES

- The first and second birds were measured by Siraj Taher. The rest by Suhel Quader.
- Linear measurements are in mm. Flattened wing chord and tail from uropygial gland measured with a ruler to the nearest mm.
- Tarsus measured to nearest 0.5 mm. (Joint of ankle to first complete scale from the claws).
- Bill Length: length of upper mandible from front edge of nostril (to nearest 0.1 mm with Vernier callipers).
- Bill Depth: Taken at front edge of nostril (to nearest 0.1 mm with Vernier callipers).
- Bill Width: Taken at front edge of nostril (to nearest 0.1 mm with Vernier callipers).
- Weight to nearest 0.25 gm with Pesola spring balance.
- Colour bands on first 5 birds were put on their right legs.
- Sex of penultimate bird could not be determined.

COMPARATIVE AVERAGE MEASUREMENTS OF *PLOCEUS BENGHALENSIS*

	WING	TARSUS	TAIL	WEIGHT
<i>Handbook</i> ¹	69-75 mm	c. 21 mm	38-45 mm	20 gms
Our Measurements ²	68.73 mm	20.18 mm	44.09 mm	23 gms

- Handbook Ali, S. and S.D. Ripley (1987)
- Our measurements are averaged from 11 specimens.

whitish; in a few specimens, perhaps very old, the sides of the head and throat become practically pure white." Among more contemporary observations, Ali (1961), while watching a mixed colony of *P. manyar* and *P. benghalensis* in Bhurian village, Naiini Tal dist., U.P., on July 8, 1961, noted "In male upper breast is a continuation or extension of the solid black

of throat, but in some examples upper breast is incipiently, or even rather distinctly, streaked as in *manyar*."

Crook (1963), who studied the black-breasted weaver in the "Kumaon tarai," does not mention a white chin and throat in the breeding plumage of a male at all. Neither does he mention the presence of white cheeks, sides of neck and

ear-coverts. In fact, the black-and-white photograph in his paper (Plate II) of a male *P. benghalensis* clearly shows black feathers in these regions of its plumage. A white chin or throat is not visible, as the bird is perched with its back to the photographer, glancing sideways at the camera. The various line drawings also show breeding males with black feathers on their cheeks, sides of neck and ear-coverts. There is no trace of a white chin or throat in these illustrations! The HANDBOOK (Ali and Ripley 1987) is uncharacteristically ambiguous with "Below, whitish with a broad dark brown band across breast." Roberts (1992) states "In breeding plumage, the male is distinguished from the other two species of weaver found in Pakistan by

are also solid black."

Rajat Bhargava (*in litt.* 2-9-1997) observed the plumage of a minimum of 200-250 trapped "for bird release business" blackbreasted weavers in Meerut, Uttar Pradesh, during the breeding season of May-Aug, 1997 and says he found 3 types of plumages on males: A. Those "purely blackthroated or blackchinned with black breast and no white neck ring. This type, in relation to the other two types of blackbreasted weaverbirds, is not less than 85 to 90% (of the total population studied). This plumage, I believe was the peak nuptial plumage," (Bird at left, Plate 1, Fig. 2). B. Birds with a "black throat with small whitish chin not much visible unless handled, with no white ear coverts. This constituted about 10-15% of total blackbreasted males. I feel this may not be a separate variety, and possibly a stage just prior to or after the peak days of nuptial plumage, or it could be another type. This type closely resembles the plate illustration of the blackbreasted in Sálím Ali's PICTORIAL GUIDE," (Bird at right, Plate 1, Fig. 2). C. Birds with a "conspicuous prominent white chin or white neck ring and white ear-coverts," (Plate 2, Fig. 1). Of this type "I came across only one specimen as shown in the picture. This I feel is a separate type and the bird was in its full nuptial plumage."

On September 24, 1997, C.T.H. observed a male in breeding plumage among a small flock feeding on maturing pearl millet *Pennisetum glaucum* near Gwalior, Madhya Pradesh. This bird had plumage like that illustrated in the PICTORIAL GUIDE, with prominent white chin patch, black cheeks and black ear coverts.

While rummaging through some old black-and-white photographs, A.P. came across a picture of the birds from near Hyderabad taken in 1985, when they were first reported there. Four males can be seen in this photograph, and all four have the white-cheeked plumage described above!

There are, however, some interesting specimens in museum collections in Europe

TABLE I
DETAILS OF MALE *PLOCEUS BENGHALENSIS*
SPECIMENS IN THE BRITISH MUSEUM

Regd. No.	88.9.20.626
Locality	Dinapur, Patna, Bihar.
Date of Collection	1865
Collector	Capt. S Pinwill
Plumage description	Throat white, cheeks partially white, ear coverts dusky suffused with white.
Regd. No.	87.7.1.1752
Locality	Monghur (<i>sic</i> Monghyr), Bihar
Date of Collection	July 1873
Collector	Not mentioned (Hume Collection)
Plumage description	Throat white; cheeks, ear coverts & neck brown with a few specks of white on ear coverts.
Regd. No.	87.7.1.1742
Locality	Muddeuderry, Dhobaghat, Fareedpur, Bengal (Faridpur, Bangladesh ?)
Date of Collection	18-6-1878
Collector	J R Cripps
Plumage description	Throat & cheeks white, specks of white on brown ear coverts, sides of neck (below ear coverts) white.
Regd. No.	1949.Whi.1.10.139
Locality	Baghobahar, Cachar, Assam
Date of Collection	?
Collector	A M Primrose ?
Plumage description	Throat, cheeks, ear coverts and sides of neck (below ear coverts) white.

having a continuous broad black band around the breast with a clear unmarked white chin and throat patch ... His lower neck and upper mantle

and America. In the British Museum of Natural History (BMNH) at Tring, Dr. S. Subramanya (*in litt.* 9-10-1997) scrutinized these specimens and wrote "the collection has only four skins of males in breeding plumage (i.e. with yellow cap)." The details of the skins (all males) are given in Table 1. See also Plate 2, Fig. 2.

Dr. Pamela Rasmussen (*in litt.* 28-10-1997) mentions "two male *P. benghalensis* of the white-cheeked form." One, in the Yale Peabody Museum (YPM No. 43464), is from Darbhanga dist., Jaingar (*sic.* Jainagar), N. Bihar and was collected on 12-10-1898. The other, in the University of Michigan Museum of Zoology (UMMZ No. 177055), is from Assam. She writes "UMMZ also has two molting males from there that appear to be partially white-cheeked."

DISCUSSION

Three published sources, from well over a century ago (between 1863 and 1890), report breeding male blackbreasted weavers with white feathers on their cheeks, ear-coverts and sides of neck. It is quite possible that Oates (1883) and Murray (1890) were quoting Jerdon (1863) in their works. Though Baker (1922-30) mentions that the throat and sides of neck turn practically pure white in some very old specimens, we think that this may not be a correct assessment for the birds studied by us, for the breeding population was quite large and certainly not all the breeding males would be "very old" specimens. Subsequent published literature is quite inconsistent in the description of a breeding male's head plumage. Some authors mention and illustrate a white throat and chin, others do not. None describe a black throat and chin. Neither do any refer to the white cheeks, ear-coverts and sides of neck described by ornithologists in the late 1800s. We wonder whether it is of any significance that the specimens in the British Museum, YPM and UMMZ, are all from east India and have either traces or a definite presence

of white in their facial plumage, similar to the birds we observed here. Do *P. benghalensis* males have a different breeding plumage in different parts of the country (north India, and east and northeast India), which has escaped the scrutiny of ornithologists and taxonomists, or is their breeding plumage inconsistent due to some other anomalies? Should hybridization of *P. benghalensis* with either of the other two weavers be ruled out, as descriptions of the plumage pattern under discussion have already been published over a century ago? (see above). But at that time this bird was known only from northern and eastern India. Could there be a relation between the populations of east Indian birds and those found near Hyderabad, similar to other species of the Subcontinent that have a disjunct distribution in eastern and northeastern India and in the Eastern Ghats and Western Ghats, e.g. *Oriolus chinensis* (Abdulali 1949)? And now, a large majority of breeding males in Meerut (Uttar Pradesh State, northern India) have no trace of white on their chins, etc., these areas being dark brown in colour. We think that a serious look at the taxonomy of *Ploceus benghalensis* is called for, vis-à-vis the summer or breeding plumage of the males under consideration and those described in standard books to date.

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